

EXHIBIT U

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

GEORGIA-PACIFIC CORPORATION,

Plaintiff,

v.

UNITED STATES GYPSUM COMPANY and
L & W SUPPLY CORPORATION,

Defendants.

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) Civil Action No. 94-489-RRM
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MEMORANDUM OPINION

Jack B. Blumenfeld, Esquire, Morris, Nichols, Arsht & Tunnell, Wilmington, Delaware; Albert E. Fey, Esquire, W. Edward Bailey, Esquire, Steven C. Cherny, Esquire, Stacy L. Kelly, Esquire, Fish & Neave, New York, New York; Joseph F. Posillico, Esquire, Synnestvedt & Lechner, Philadelphia, Pennsylvania; Robert A. Currie, Esquire, Georgia-Pacific Corporation, Atlanta, Georgia; counsel for plaintiff

Richard K. Herrmann, Esquire, Stradley, Ronon, Stevens & Young, LLP, Wilmington, Delaware; James M. Amend, P.C., David K. Callahan, Esquire, Paul R. Garcia, Esquire, Christian C. Taylor, Esquire, Kirkland & Ellis, Chicago, Illinois; John M. Lorenzen, Esquire, USG Corporation, Chicago, Illinois; attorneys for defendants

Dated: December 27, 1996

McKELVIE, District Judge

This is a patent case. Plaintiff Georgia-Pacific Corporation owns U.S. Patent Nos. 4,647,496 (the " '496 patent"), 4,810,569 (the " '569 patent"), 5,319,900 (the " '900 patent"), and 5,371,989 (the " '989 patent"). The patents relate to the manufacture and use of fibrous mat-faced gypsum board.

Georgia-Pacific alleges defendants United States Gypsum Company and L&W Supply (collectively hereinafter referred to as "U.S. Gypsum") are willfully infringing the '496, '569, '900 and '989 patents by manufacturing and selling a gypsum sheathing called Weatherock. U.S. Gypsum has denied infringement and counterclaimed for a judgment that these patents are invalid and unenforceable.

The case was tried to a jury beginning on January 29, 1996. On February 9, 1996, the jury returned with a verdict finding U.S. Gypsum infringed claims of the '569 and '900 patents and had infringed, induced others to infringe and had contributed to the infringement of claims of the '496 and '989 patents. A copy of the verdict is attached. The jury found U.S. Gypsum had failed to show there was no infringement of these claims under the reverse doctrine of equivalents. The jury also found U.S. Gypsum had failed to show by clear and convincing evidence that the asserted claims of the four patents are invalid due to obviousness or for lack of enablement, or that the claims of the '989 patent are invalid due to obviousness-type double patenting.

U.S. Gypsum has moved for an order granting its judgment as a matter of law, or, in the alternative, for a new trial. The parties have completed briefing on the motions and the court heard oral argument on May 6, 1996. This is the court's decision on these motions.

I. FACTUAL AND PROCEDURAL BACKGROUND

A. The Fields of the Invention and the Plaintiff's Patents

1. The Field of Invention: Gypsum Board and Exterior Insulating Systems

Gypsum is a mineral. Plaster of Paris is a fine powder of ground gypsum. When water is added to Plaster of Paris, it makes a slurry. Gypsum board is a panel with a core of hardened gypsum slurry sandwiched between paper cover sheets. Gypsum sheathing is a gypsum board designed for exterior use. Its gypsum core contains additives which improve its water resistance.

Builders have used gypsum sheathing in construction as a part of an exterior insulation system in which the builder will place the insulation on the outside rather than on the inside of the building. In an exterior insulation system, the gypsum sheathing is attached as a support surface to the frame of the outside wall. The insulation is then attached to the sheathing. A mesh-like material is affixed to the insulation and an exterior finish, such as stucco or aluminum or wood siding, is attached to the mesh.

Traditionally, gypsum sheathing included a core of gypsum sandwiched between

layers of water-repellant paper cover sheets. The sheathing was mechanically attached to the frame of the building with, for example, nails or screws. The insulation was then glued to the sheathing.

A number of problems were identified with this paper-covered sheathing. As the paper tended to absorb water, it needed to be covered when stored at a job site and when it was being installed. Otherwise, the water might penetrate the paper and be absorbed into the core, which substantially reduced the strength of the sheathing. If the paper became wet after the sheathing was installed, the bond between the paper and the core might deteriorate, which could lead to cracking of the exterior finish.

Paper is also limited in its adhesive strength. As the insulation was typically glued to the paper on the sheathing, this tended to undermine the adhesive strengths of the various components of the system. While a builder might seek to overcome that problem by screwing or nailing insulation to the sheathing and the frame, that would both increase the installation costs and the risk that the fastener would provide a path for water to penetrate the insulation, the paper and the gypsum core.

2. February 27, 1984: Georgia-Pacific's Patent Application

On February 27, 1984, Georgia-Pacific, as assignee of Charles W. Lehnert and Brian Randall, filed an application with the United States Patent and Trademark Office for a patent on an invention relating to an improved gypsum board or sheathing. The application described a method of manufacturing a board on a conventional wallboard

machine in which a gypsum slurry of a particular viscosity and including fire and water resistant additives was fed onto a moving sheet of glass fiber mat. The slurry penetrated substantially through some portions of the underlying mat to form a thin film on portions of the outer surface of that mat. At that viscosity, the slurry did not penetrate through portions of the overlying mat.

The application reported that the fibrous mat-faced sheathing was an improvement over the paper-faced sheathing in that it had improved rigidity, strength and water resistance, and can be installed with water-based adhesives or secured by nailing. It set out 20 claims, including claims to an exterior insulating system comprising a fibrous mat-faced gypsum support system, a board with a gypsum core sandwiched between two sheets of porous glass mat, a process for manufacturing the board, the board with water-resistant additives, and the board with an outer surface substantially free of gypsum.

By an action dated June 5, 1985, an examiner with the Patent and Trademark Office rejected all 20 of the claims as being unpatentable over U.S. Patent No. 4,504,533 to Altenhofer et al., which disclosed a gypsum construction panel comprising a gypsum core having fibrous mat facings.

In a reply dated December 6, 1985, John T. Synnestvedt, counsel for Georgia-Pacific, sought to distinguish Altenhofer as directed to improving adhesive bonding of a composite web on the side of a gypsum sheet and as nothing in Altenhofer suggested: 1) a method for installing a panel in an exterior insulating system; 2) a glass mat-faced

gypsum board in which one face of the board has set gypsum and the other is substantially free of gypsum; 3) a method for regulating gypsum slurry viscosity; 4) a fibrous mat-faced gypsum board having water resistant additives; and 5) a shaft wall assembly.

Following a March 1986 telephone conference with the Examiner, Alexis Barron of Synnestvedt & Lechner, filed an amendment adding a claim 21 directed to an exterior finishing system, declarations of the inventors describing the dramatic weatherability of the board and identifying and distinguishing certain prior art, including Canadian Patent No. 993,779 to Morrone, U.S. Patent Nos. 4,378,405 and 4,477,300 to Pilgrim, U.S. Patent No. 3,993,822 to Knauf, and U.S. Patent No. 3,944,698 to Dierks.

By an action dated April 18, 1986, the Examiner reported that he had found three distinct inventions described in the patent and required the applicant pursuant to 35 U.S.C. § 121 to restrict the application to one of the three. Barron initially objected to the Examiner's decision. Thereafter, he confirmed Georgia-Pacific had elected to proceed with the product claims. In August, Barron filed a supplemental amendment that, among other things, amended the board claims to claim an exterior insulating system that incorporated a glass mat-faced gypsum board. He added 26 claims, reviewed certain other prior art and renewed Georgia-Pacific's position that none of the prior art discloses the use of a glass mat-faced gypsum support surface as a structural support member in an exterior system.

By a notice dated September 5, 1986, the Examiner allowed the pending claims.

3. March 1987: The Systems Patent (the '496 patent) Issues and Georgia-Pacific Files a Divisional Application on the Board Claims

Georgia-Pacific's patent on the systems claims issued on March 3, 1987 as No. 4,647,496, titled Use of Fibrous Mat-Faced Gypsum Board in Exterior Finishing Systems for Buildings. Georgia-Pacific contends U.S. Gypsum has infringed five claims of the '496 patent: claims 1, 2, 5, 6 and 11. Claims 1 and 11 are independent claims. They read:

1. An exterior insulation system for a building comprising a glass mat-faced gypsum support surface, insulating material having an inner surface and an outer surface, the inner surface of which is adhered to said support surface by an adhesive material, the insulating material being substantially free of channels penetrating therethrough and between said inner and outer surfaces, and an exterior finishing material overlying the outer surface of said insulating material.
11. An exterior finishing system for a building comprising an underlying structural support element which is covered with an overlying finishing material, said support element including gypsum board comprising a set gypsum core sandwiched between two sheets of porous glass fiber mat, the gypsum core including one or more additives which are effective in improving the water-resistant properties of the board in an amount at least sufficient to impart to the board improved water-resistant properties.

On March 2, 1987, Georgia-Pacific filed a request for a divisional application for the board claims. By a decision dated June 19, 1987, the Examiner rejected the board claims as unpatentable over Altenhofer, both Pilgrim patents, and Morrone. The Examiner noted Altenhofer disclosed a gypsum board with a gypsum core layered with a

glass fiber web, Pilgrim disclosed a gypsum board between two facing sheets of nonwoven glass fiber, and Morrone disclosed a process for making a gypsum board wherein a slurry is applied to a glass mat.

Barron responded by a paper dated December 22, 1987. He argued that Altenhofer is distinguishable as it claimed an outer surface that is a composite sheet of non-woven and woven fiberglass, it did not claim a board in which portions of one of the glass mats are coated with gypsum and it did not disclose the process for making the boards as described in Georgia-Pacific's application. He distinguished Pilgrim as claiming a board in which the glass mats are covered by a thin layer of core gypsum. He distinguished Morrone as also calling for a total coating of the glass fiber mat facing by the core gypsum. He noted that an advantage of the applicant's claimed invention is that it avoided a bleed through of gypsum during the manufacturing operation, avoided a build-up of slurry on the equipment, and thus allowed a manufacturer to change from paper board to fiber glass board without having to shut down and clean up the manufacturing line. He also noted that the gypsum-free surface of the applicant's board was stronger than the board where the gypsum had bled through, and it offered a convenient surface to print product data.

On March 8, 1988, Barron supplemented his earlier reply to the Examiner by adding nine claims directed to a board and a process for making a board in which both surfaces of the glass mat are substantially free of set gypsum. In this paper, he

acknowledged that the prior art disclosed a gypsum product of the type in which a set gypsum core is sandwiched between two glass mats, and argued that this art did not disclose a gypsum board in which the outer surface of each of the glass mats is substantially free of set gypsum. In that paper, he also distinguished Knauf, in that the board described in Knauf has an underlying glass mat that is not substantially free of set gypsum, and that in Knauf's process for manufacturing the board, a barrier material was placed below the mat to prevent the slurry from penetrating through the mat. He wrote:

In summary, it can be said that the prior art does not disclose that a glass mat-faced gypsum board can be produced by means of controlling the viscosity of a gypsum slurry in a manner such that the slurry penetrates but part-way into a porous glass mat, thereby affixing firmly one surface of the mat to the set gypsum core while the other surface remains gypsum-free.

In a second supplementary reply dated March 22, 1988, Barron added ten more claims directed to the nature and thickness of the mats and the slurry in various embodiments of the invention.

4. March 1987: The Board Patent (the '569 patent) Issues

By an office action dated May 9, 1988, the Examiner allowed the pending claims subject to certain modifications. Patent No. 4,810,569, titled Fibrous Mat-Faced Gypsum Board was issued on March 7, 1989. Georgia-Pacific contends U.S. Gypsum has infringed claim 1 of that patent. It reads:

1. Gypsum board comprising a set gypsum core sandwiched between two sets of porous glass mat, each of which has an inner and outer

surface, said mat comprising randomly distributed glass fibers bonded by an adhesive material, the inner surface of each of said mats adhered to said gypsum core by a portion of the set gypsum comprising said core, the outer surface of one of said mats having portions thereof coated with set gypsum comprising portions of the set gypsum of said core, and the outer surface of the other of said mats being substantially free of set gypsum.

In February 1992, Peter Cronk of Synnestvedt and Lechner filed a continued application based on Georgia-Pacific's original February 27, 1984 application. This application set out 26 claims directed to a gypsum board for use in an exterior finishing system. The application included claims to a board with water-resistant additives and a method of manufacturing that board.

By an action dated April 27, 1993, the Examiner rejected all of the claims. One reason cited by the Examiner for rejecting certain claims directed to the method of forming the board is that they were anticipated by German Utility Model No. 7,806,114, which had been assigned to Rigips Baustoffwerke GmbH & Co. The Examiner rejected other claims directed to the board as obvious over Morrone in view of Novak, as the German patent disclosed a gypsum board comprising a core of set gypsum sandwiched between two sheets of porous glass fibers mats, with an outer surface permeated by the gypsum and Novak disclosed a board formed of a gypsum core between sheets of fiber with the outer surfaces uncalendered. The Examiner concluded it would have been obvious to one of ordinary skill in the art to leave the outer surface of the board of the German patent unpermeated by gypsum. The examiner also concluded it would have

been obvious to one of ordinary skill in the art to comprise the core of the German patent of a fire-resistant additive to protect the structure to which the board is applied.

By a paper dated October 27, 1993, Cronk responded to the rejection with comments, canceled a claim, and amended certain other claims. Cronk argued that while Rigips disclosed a gypsum board including a set gypsum core bound by a pair of composite glass mat layers, it could be distinguished for a number of reasons, including that the composite layers were more expensive and complicated than the mats claimed in Georgia-Pacific's application, in that the mats included an inner fabric, a middle layer of chopped glass mat and an outer layer of glass mat with an increased density. He also argued that those of ordinary skill in the art would not have deciphered the applicants' viscosity control solution from the disclosure in the Rigips reference. Cronk argued that Morrone did not disclose the use of its board in exterior insulation or finishing systems and did not show a mat substantially free of gypsum on the exterior surface.

By an office action dated February 14, 1994, the Examiner again rejected all of the claims under 35 U.S.C. § 112, for failure of the specification to point out particularly how the mats are adhered to the gypsum core, for failure to show how the gypsum flow is controlled, and as to certain claims as indefinite. The Examiner noted that the claims would be allowable if rewritten or amended to overcome the rejections.

No prior art of record shows a gypsum board comprising a set gypsum core sandwiched between mats comprising randomly distributed glass fibers, with the set gypsum being adhered to the mats by a portion of the set

gypsum and having an outer surface of the mats free of set gypsum.

Joseph Posillico of Synnestvedt & Lechner responded by a paper dated May 16, 1996, in which he reviewed where the specification described how the mats adhere to the core, and set out the viscosity flow-control parameter.

5. December, 1994: The Second Board Patent (the '989 patent) Issues

On June 2, 1994, the Examiner confirmed the claims would be allowed. Patent No. 5,371,989, titled Use of Fibrous Mat-Faced Gypsum Board, issued December 13, 1994. Georgia-Pacific contends U.S. Gypsum has infringed claims 1, 6, 8, 9, 10, 12, 15 and 17 of that patent. The independent claims 1, 9 and 17 read as follows:

1. A gypsum board comprising a set gypsum-containing core sandwiched between two sheets of porous glass mat, each of said mats consisting of randomly distributed glass fibers bonded by an adhesive material, said mats adhered to said set gypsum core by a portion of said set gypsum, at least a first of said mats having an outer surface which is substantially free of set gypsum.
9. An exterior insulation system for a building, comprising a support surface, insulating material having an inner surface and an outer surface, the inner surface of which is adhered to the support surface by an adhesive material, and an exterior finishing material overlying the outer surface of the insulating material, said support surface comprising a gypsum board according to claim 1.
17. A gypsum board comprising a set gypsum core having at least one porous, non-woven glass mat thereon, said mat consisting of randomly distributed glass fibers bonded by an adhesive material, said mat adhered to said gypsum core by mechanical interlocking means formed from a portion of said randomly distributed glass fibers bonded to said set gypsum, whereby an outer surface of said mat is substantially free of set gypsum.

On May 6, 1993, Peter Cronk of Synnestvedt and Lechner filed a continued application based on Georgia-Pacific's original February 27, 1984 application. This application set out 16 claims directed to a gypsum board for use in an exterior finishing and roof deck system. The application included claims to a finishing system with a fibrous mat-faced gypsum board with a core having one or more additives which improve the board's water and fire resistance. The application describes adding mineral fibers to the gypsum core to improve the ability of the set gypsum composition to maintain its integrity when subjected to the heat of fire, and describes mineral fibers, such as glass fibers, asbestos fibers and calcium sulfate whisker fibers, as examples of the materials.

In August 1993, the Examiner reported that the application contained claims directed to patentably distinct species, including exterior, interior and roof deck systems, and called on the applicant to elect a single disclosed species for prosecution on the merits. Cronk elected to pursue claims 1 and 4 through 7, which were directed to an exterior finishing system; and claims 12 through 16, which were directed to a board with fire and water resistant additives. Consequently, Cronk withdrew claims 2, 3 and 8 through 11. The examiner then rejected the claims for obviousness-type double patenting over claims of the '496 and U.S. Patent No. 5,220,762 issued to Lehnert et al. and assigned to Georgia-Pacific, titled Fibrous Mat-Faced Gypsum Board in Exterior and Interior Finishing Systems for Buildings.

By an amendment filed on October 10, 1993, Cronk canceled claims 1, 4 through 6, 7 and 11. In addition, Cronk requested that the Examiner reconsider the rejection of claims 12-16 in light of a disclaimer filed with the amendment by which Georgia-Pacific disclaimed the terminal part of any patent granted on the application which would extend beyond the expiration date of the '762 patent.

By a notice dated November 11, 1993, the Examiner allowed claims 12-16 of the application. Patent No. 5,319,900, titled Finishing and Roof Deck Systems Containing Fibrous Mat-Faced Gypsum Boards, was issued on June 14, 1994. Georgia-Pacific contends U.S. Gypsum has infringed claims 1 and 2 of that patent. They read as follows:

1. Gypsum board comprising a set gypsum core faced with a fibrous mat, the gypsum core including one or more additives which are effective in simultaneously improving the water resistance and fire resistance properties of the board in an amount at least sufficient to impart to the board improved water resistance and fire resistance properties.
2. The gypsum board of claim 1, wherein said fibrous mat contains glass fibers.

B. Pre-Trial and Trial Proceedings

1. Pretrial Proceedings

Georgia-Pacific filed this action against United States Gypsum Company and L & W Supply Corporation on September 24, 1994, alleging they have willfully infringed claims of the '496, '569 and '900 patents and that they have actively induced and

contributed to infringement by others. U.S. Gypsum responded on November 18, 1994, by denying infringement, and asserting a number of affirmative defenses, including a defense that the patents are invalid for a failure to meet the conditions in 35 U.S.C. § 102, that the inventions claimed are not new, for a failure to meet the conditions of 35 U.S.C. § 103, that the subject matter of the patent would not have been obvious at the time of the invention to a person having ordinary skill in the art to which it pertains, and for a failure to comply with the conditions of 35 U.S.C. §§ 111 and 112; that the claims of the patent particularly point out and distinctly claim the subject matter which the patentee regards as his invention or the preferred embodiment thereof. U.S. Gypsum also counterclaimed for a judgment that the three patents are invalid and unenforceable for the reasons identified in its answer.

Following a conference on December 9, 1994, the court entered a Scheduling Order providing that all discovery be initiated so that it would be completed on or before July 1, 1995 and scheduling the case for a ten-day jury trial beginning on September 25, 1995.

In January 1995, Georgia-Pacific moved for an order compelling U.S. Gypsum to provide more responsive answers to interrogatories Georgia-Pacific had served on November 4, 1995, seeking, among other things, the factual basis for U.S. Gypsum's contentions that the patents in suit were invalid or unenforceable. During a January 6, 1995 conference on the motion, the court reviewed with counsel the opinions in Scovill

Mfg. Co. v. Sunbeam Corp., 61 F.R.D. 598 (D. Del. 1973) and Wesley-Jessen Corp. v. Pilkington Visioncare, Inc., 844 F. Supp. 987 (D. Del. 1994) and the court's view that contention interrogatories can be an important tool to be used early on in discovery. In granting Georgia-Pacific's motion, the court noted:

To the extent that you don't fairly disclose those matters in response to the contention interrogatories, then I will prevent you at trial from arguing or offering proof on those claims, or those arguments. . . . There will come a time at trial where each of you may stand up and say, Judge, we asked them ~~back in November on this issue and they didn't produce the information.~~ We haven't had a fair chance to take discovery on it and we ask you to preclude them from offering proof. And, consistent with these matters, I will preclude a party from offering facts or argument on points where they haven't fairly disclosed those matters in response to a contention interrogatory that seeks that information. . . . [T]he party who is seeking the information should be comfortable. If you can show me the other side has been unreasonable, I will prevent them from ambushing you later on.

On January 10, 1995, the court entered an order implementing a stipulation filed by the parties by which Georgia-Pacific amended its complaint to add claims alleging defendants infringed the claims of the '989 patent. In answering the amended complaint, U.S. Gypsum no longer contended plaintiff's patents were invalid for failure to comply with the requirements in 35 U.S.C. § 111. Otherwise, it answered the amended complaint by again denying infringement, asserting the same affirmative defenses and counterclaiming for a judgment that all of the patents are invalid and unenforceable. U.S. Gypsum joined as a new affirmative defense and claim for relief allegations that Georgia-Pacific had sought to mislead the Patent and Trademark Office about the nature of the

'405 patent issued to Pilgrim as to whether Pilgrim disclosed the inclusion of a water-resistant additive in the core of the board.

As the parties continued to report their disagreement on the adequacy and timing of responses to contention interrogatories, the court wrote to counsel on March 16, 1995 and reminded counsel of the court's view on the subject by sending counsel a transcript of a recent proceeding in another case where the court told counsel:

[I]f you show me you're fairly responding with the information you've got when you've got it and you update and give the other side notice before the pretrial conference and before the trial, that's fine. But if it looks like you're holding back on something and the other side hasn't had a fair chance to respond in preparation for trial, I'll just preclude you from putting those facts or evidence in at trial. . . . And part of the reason I'm all over everybody in the early stages of the case is because there will come a time at the pretrial conference where I'll start cutting some heads and arms off. I've done it a couple of times and people have been a little upset, but part of my theory is we've talked about it for two months and if you haven't fairly disclosed it, it's too late at the pretrial conference to say "By the way, Judge."

The court reviewed these issues with counsel again during a conference on March 23, 1995, during which the court discussed setting firm dates in March and April by which the parties would respond to contention interrogatories. Thereafter, any party seeking to supplement a response as to a contention or the basis for a contention would have to show why that party could not have provided that response sooner.

The court reviewed these issues with counsel again during an April 6, 1995 conference. During that conference the court set May 1, 1995 as a date by which U.S.

Gypsum's position on the bases for its defenses would be fixed.

Following the April 6, 1995 conference, the court entered an Amended Scheduling Order extending the date for the completion of discovery to October 13, 1995 and rescheduling the trial to January 1996.

On September 6, 1995, Georgia-Pacific moved for an order precluding U.S. Gypsum from relying on certain prior art or asserting certain defenses, reporting that on September 1, U.S. Gypsum had served a Fourth Amended Reply to Georgia-Pacific's contention interrogatories and in those answers identified 57 prior art references not previously asserted, and new bases for defenses based on invalidity, including the Morrone '779 patent, a Pearson '371 patent, and a contention U.S. Gypsum invented a board similar to Weatherock in the late 1970's. During a conference on September 13, 1995, the court granted Georgia-Pacific's request for relief, subject to a further showing by U.S. Gypsum as to why it had failed to provide the information in these answers earlier. With regard to newly disclosed facts or art, the court invited U.S. Gypsum to show it had only recently learned of these facts or the art. With regard to new contentions based on previously disclosed facts, the court invited U.S. Gypsum to show that Georgia-Pacific would not be unfairly prejudiced by having to respond to them at the trial.

U.S. Gypsum followed up on that invitation with further argument on why it should not be precluded from obtaining relief based on matters, facts or contentions identified for the first time in its Fourth Amended Reply. After reviewing the matter and

having found U.S. Gypsum failed to show why it could not have set out the factual and legal bases for these contentions earlier, the court entered an order precluding U.S. Gypsum from relying at trial on the new matter disclosed in the September 1st Fourth Amended Reply.

2. The Trial

The case was tried to a jury beginning on Monday, January 29, 1996. At the trial, Georgia-Pacific offered evidence on Brian Randall and William Lehnert's work in the early 1980's that led to the development of the inventions that are the subject of the patents, including a glass-mat-surfaced gypsum board and Georgia-Pacific's introduction and marketing of products based on their invention, including a glass-mat faced gypsum board called Dens Glass and later a board called Dens Glass Gold, by which Georgia-Pacific added a gold-colored acrylic coat on the outer surface of the Dens Glass. Georgia-Pacific manufactures its Dens Glass Gold on a traditional gypsum board manufacturing line, by pouring a gypsum slurry onto that mat. It increases the viscosity of the slurry to prevent it from flowing or bleeding through the mat. It then places a mat on top of the slurry. As some slurry may seep through the bottom mat, portions of the outer surface of the bottom mat may be covered by gypsum. However, the outer surface of the top mat is gypsum-free.

Georgia-Pacific offered evidence showing that Georgia-Pacific was losing sales on Dens Glass products with customers buying U.S. Gypsum's competing product,

Weatherock, which U.S. Gypsum began selling in the 1990s. U.S. Gypsum manufactures its Weatherock board by placing a fiber glass-mat on release paper, pouring a densified gypsum slurry on the mat, forcing the slurry into and through the mat, adding a foamed gypsum slurry as a core, and placing a fiber glass-mat on top of the core slurry. It then removes the paper, to have a board with 95% of the bottom surface (where the paper had been) covered with gypsum, and with the outer surface of the top mat substantially free of gypsum. U.S. Gypsum admits it adds a water-resistant additive to its slurry, but denies it adds a fire resistant additive.

Brian Randall testified he had taken a sample of Weatherock and soaked it in water. As the core gypsum dissolved, he found glass fiber filaments in the core, which he concluded U.S. Gypsum had added to make the board more fire-resistant.

Georgia-Pacific called Robert Bruce to offer opinions as an expert witness on the subject of gypsum manufacturing. He testified to his opinions that Weatherock infringed claims of the patents in issue, such as, for example, claims 1 of the '569 and claim 1 of the '989 patent. They read:

Claim 1 of the '569 patent.

1. Gypsum board comprising a set gypsum core sandwiched between two sets of porous glass mat, each of which has an inner and outer surface, said mat comprising randomly distributed glass fibers bonded by an adhesive material, the inner surface of each of said mats adhered to said gypsum core by a portion of the set gypsum comprising said core, the outer surface of one of said mats having portions thereof coated with set gypsum comprising portions of the

set gypsum of said core, and the outer surface of the other of said mats being substantially free of set gypsum.

Claim 1 of the '989 patent.

1. A gypsum board comprising a set gypsum-containing core sandwiched between two sheets of porous glass mat, each of said mats consisting of randomly distributed glass fibers bonded by an adhesive material, said mats adhered to said set gypsum core by a portion of said set gypsum, at least a first of said mats having an outer surface which is substantially free of set gypsum.

Bruce based his opinions in part on his conclusions that: 1) the gypsum coating on the bottom of the Weatherock board covered only portions of the board; 2) the core of the Weatherock board was sandwiched between two glass mats; and 3) the facing of a gypsum board is a surface reinforcing material and, therefore, the Weatherock board with fiber glass-mat covered with gypsum is a glass-mat faced board.

U.S. Gypsum called a number of witnesses to testify, including Dr. Richard A. Dr. Kuntze. Dr. Kuntze offered opinions as an expert witness in the field of gypsum board design, manufacture and use. He testified that the words glass-mat faced as used in the exterior insulation and finishing systems (EIFS) industry mean glass-mat on the face, or outer surface of the board (and nothing on top of the glass). Consequently, as Weatherock had gypsum on one outer surface of the board, that side was not glass-mat faced.

Dr. Kuntze reviewed prior art in the field, including the Morrone Canadian Patent No. 993779, U.S. Patent 3,993,822 to Knauf, German utility model number 7806114 to

Rigips Baustoffwerke, and the Pilgrim Patent, U.S. patent 4,378,405. He offered his opinion that the prior art described the same kind of invention that is contained in the board claims of the patent. Rigips describes a board with gypsum free surfaces. Morrone and Pilgrim described a board using randomly-oriented fiberglass mat. Pilgrim described adding fiberglass to increase fire resistance of the core of the board.

In instructing the jury, the court construed the disputed terms of the claims as follows. The word "portions" should be read with its ordinary meaning, "a part of a whole." The word "sandwiched" should be read with its ordinary meaning, "between two things and not through and outside one of those two things." To those skilled in the art, the words "glass mat-faced" mean "glass mat surface reinforcing material."

In closing arguments, counsel for Georgia-Pacific conceded that with the court's claim construction Georgia-Pacific would not be able to establish the bottom surface of Weatherock was only covered with portions of gypsum, thus conceding a failure to prove infringement of claim 1 of the '569 patent and claim 6 of the '496 patent.

Counsel argued Georgia-Pacific had establish Weatherock infringed the balance of the asserted claims, as Weatherock was a "glass mat-faced" gypsum board, in that it had a glass mat surface reinforcing material. Counsel argued Weatherock met the "sandwiched" limitation, in that the gypsum core was sandwiched between the two mats, and what was through and outside the bottom mat was not the core gypsum, but the densified layer of gypsum. Counsel also argued Georgia-Pacific had established

Weatherock had sufficient fibers in the core to create a fire-resistant additive.

In responding to U.S. Gypsum's evidence as to obviousness, counsel argued that Rigips taught away from the invention, in that the text of the patent suggested the invention solved a problem that would otherwise arise from using fiberglass, that Morrone and Pilgrim had gypsum on the outside of both mats, and that Knauf was made from a composite mat, a woven fabric.

Counsel reviewed other evidence relating to secondary considerations as to obviousness and other evidence relating to Georgia-Pacific's claim for \$650,000 as damages for lost profits.

In his closing argument, counsel for U.S. Gypsum argued Georgia-Pacific had failed to prove infringement and failed to rebut U.S. Gypsum's evidence on obviousness.

The jury's verdict is attached. It shows the jury found Georgia-Pacific had met its burden of showing U.S. Gypsum infringed the asserted claims of the patents, that Georgia-Pacific had failed to meet its burden of proof to show no infringement under the reverse doctrine of equivalents, or invalidity due to obviousness, double-type patenting, a lack of enablement. The jury found Georgia-Pacific had proved damages of \$325,000.

U.S. Gypsum has moved for judgment as a matter of law or in the alternative for a new trial. Its briefing includes three arguments. First, it argues the court improperly precluded it from presenting certain defenses. Second, it contends there was insufficient evidence to support the jury's infringement findings. Third, it contends the claims in issue

are invalid as a matter of law.

II. DISCUSSION

In deciding whether to grant judgment as a matter of law on a particular issue after a jury has returned a verdict, the court must determine whether substantial evidence exists in the record to support the jury's verdict when the correct legal standard is applied.

Markman v. Westview Instruments, Inc., 52 F.3d 967, 975 (Fed. Cir. 1995), aff'd, 116

S. Ct. 1384 (1996). Substantial evidence is the quantum of evidence that reasonable

jurors would accept as adequate to support the finding under review. The Perkin-Elmer

Corp. v. Computervision Corp., 732 F.2d 888, 893 (Fed. Cir.), cert. denied, 469 U.S. 857

(1984): The court must consider all evidence and draw all reasonable inferences from the

evidence in the light most favorable to the nonmovant. Id. In addition, the court may not

determine the credibility of the witnesses, and it may not "substitute its choice for that of

the jury as between conflicting elements of the evidence." Id.

In deciding whether to grant a new trial, the court may consider, among other things, whether the verdict is against the weight of the evidence, Wagner v. Fair Acres

Geriatric Center, 49 F.3d 1002, 1017 (3d Cir. 1995), whether the verdict turned on

erroneously admitted evidence, Blanche Road Corporation v. Bensalem Township, 57

F.3d 253 (3d Cir.), cert. denied, 116 S. Ct. 303 (1995), or whether the court improperly

instructed the jury. Cooper Distributing Co. v. Amana Refrigeration, 63 F.3d 262 (3d Cir.

1995); see generally Lind v. Schenley Industries, Inc., 278 F.2d 79, 90 (3d Cir.), cert.

denied, 364 U.S. 835 (1960). In determining whether a verdict is against the weight of the evidence, the court should not substitute its view of the facts for that of the jurors.

Wagner, 49 F.3d at 1017. Nevertheless, the court may grant a new trial even when judgment as a matter of law is inappropriate. Id. Ultimately, the grant of a new trial is within the sound discretion of the district court. Id.

1. Did the court improperly preclude U.S. Gypsum from presenting certain defenses?

U.S. Gypsum contends the court improperly precluded it from seeking relief based on claims that the board and additive claims are anticipated by a single prior art reference, that the asserted claims fail to distinctly point out and claim what Lehnert and Randall regard as their invention, and that Georgia-Pacific failed to name the proper inventors in the patents in suit. It is not clear why U.S. Gypsum is calling on this court to revisit this issue. Early on in the case, the court put counsel on notice of its view that discovery relating to contentions and the basis for contentions is an effective tool that can assist the court and counsel in formulating and simplifying issues consistent with Federal Rule of Civil Procedure 16. Early on in the case, the court set deadlines for counsel to respond to these discovery questions and warned counsel of the consequences that would follow from a failure to respond, or to identify why counsel could not respond at that time. Georgia-Pacific heard that message and used that tool. When Georgia-Pacific concluded U.S. Gypsum had not heard that message, it asked the court for assistance well before the

close of discovery. As noted above, the court's decision to preclude U.S. Gypsum from making certain arguments and offering certain evidence came after a number of conferences, and after U.S. Gypsum had numerous opportunities to respond to Georgia-Pacific's discovery requests or to show why it should be relieved from having to respond. This court sees no reason to revisit the issue.

2. Is there sufficient evidence in the record to support the jury's verdicts as to infringement?

U.S. Gypsum argues that Georgia-Pacific's evidence as to infringement was deficient in two respects. First, U.S. Gypsum argues there was insufficient evidence from which the jury could conclude Weatherock contained fire resistant additives so as to infringe that element of claims 1 and 2 of the '900 patent, and claim 8 of the '989 patent. The court agrees. Even if we accept Georgia-Pacific's evidence that it found some glass fibers in Weatherock's gypsum core---which was disputed by U.S. Gypsum---that testimony is not sufficient to show there were enough fibers to give the boards a fire resistant property. For example, in prosecuting the '900 patent, Georgia-Pacific reported that the amount of glass fibers to be included in the core to provide the fire resistant properties should be at least 0.03 % of the weight of the slurry. Georgia-Pacific has not offered evidence to show that the fibers they contend they found in Weatherock are sufficient to meet this minimum weight. As the verdict as to these claims is against the weight of the evidence, the court will enter an order granting U.S. Gypsum's motion for a

new trial as to Georgia-Pacific's claims it is infringing these claims.

Second, U.S. Gypsum contends there is insufficient evidence to support a finding of infringement as to claims 6 and 11 of the '496 patent, and claims 1, 6, 8, 9, 10, 12, and 15 of the '989 patent, as they claim a gypsum board or a system with a gypsum board with the core gypsum "sandwiched" between two mats. U.S. Gypsum contends that as Weatherock has gypsum penetrating through and on the outside of one of the mats, its core is not "sandwiched" between the mats and thus it does not infringe.

Georgia-Pacific had initially argued Weatherock met this "sandwiched" limitation by having the gypsum slurry between the two mats and that U.S. Gypsum had simply added a feature by also forcing the gypsum through one mat and onto its outer surface. After the court construed sandwich to read "between two things and not through and outside of one of those two things," Georgia-Pacific offered a new argument: Weatherock still met this limitation as its core slurry was sandwiched between the two mats, what penetrated through the mat and to the outside on the Weatherock was not the core gypsum slurry, but the densified layer of gypsum U.S. Gypsum added and pressed through the mat before it added the gypsum slurry. Needless to say, this new argument, this new view of the facts (and perhaps new construction of the claims) caused some stir in the courtroom, as it came during the rebuttal portion of plaintiff's closing argument.

A review of the prosecution history of the patents as set out above shows Lehnert and Randall started out claiming they had developed a method of manufacturing a

gypsum board with fiber glass mats on a conventional wallboard machine. They accomplished this by controlling the viscosity of the slurry as it was fed onto a moving sheet of glass fiber mat. With a porous mat, they reported the slurry would penetrate the mat to form a thin film on portions of the outer surface of the mat. The words they used in claiming their invention, included a "gypsum slurry," which was to be poured between "two glass mats." In that context, they described the slurry as sandwiched between the mats and the term "sandwich" can be read with its ordinary meaning, that is to place between two things (but not on the outside of either). Lehnert and Randall further described the mats in their claims as "porous," and noted that for certain claims at least one of them would allow the core gypsum to penetrate through the porous mat. In that context, by claiming "a board comprising a set gypsum core sandwiched between two sheets of porous glass mat...the outer surface of one of said mats having portions thereof coated with set gypsum," they added words to further describe the sandwich as having a core of slurry that penetrated through a porous mat and formed a thin film on portions of the outer surface. For other claims, they claimed a sandwich where at least one mat had an outer surface that was substantially free of gypsum (implying that the other need not). In others, they claimed a sandwich where both surfaces were substantially free of gypsum. And in others, they claimed a board of core gypsum sandwiched between two mats, without claiming any unique or particular surface on the outside of the mats.

As counsel maneuvered through the Patent and Trademark office and around and

past the prior art, they refined and rewrote the claims frequently to limit the extent to which they claimed the core gypsum would penetrate through the glass mats.

By construing the word sandwiched, the court did not constrain Georgia-Pacific from arguing (or the jury from finding) that a claim may describe a board with a gypsum core sandwiched between two porous glass mats and (where the additional matter is claimed) through the porous mat and on the outer surface of one mat. See for example, claim 1 of the '569 patent, which reads:

1. Gypsum board comprising a set gypsum core sandwiched between two sets of porous glass mat, each of which has an inner and outer surface, said mat comprising randomly distributed glass fibers bonded by an adhesive material, the inner surface of each of said mats adhered to said gypsum core by a portion of the set gypsum comprising said core, the outer surface of one of said mats having portions thereof coated with set gypsum comprising portions of the set gypsum of said core, and the outer surface of the other of said mats being substantially free of set gypsum.

The issue raised by the jury's finding of infringement, is whether the claims asserted by Georgia-Pacific cover Weatherock, a board with slurry that is through and on the outside of one of the mats. Claim 6 of the '496 patent does, but as noted above, U.S. Gypsum does not infringe that claim as the claim includes the limitation that the gypsum on the outside cover only a portion of the mat. Georgia-Pacific now concedes more than portions of one side of Weatherock are covered with gypsum.

Claim 11 of the '496 patent does not cover a board with slurry that is through and on the outside of the mat, as it claims in part a board with a gypsum core sandwiched

between two mats, but does not claim a board where the core penetrates through and onto the outside of the mat. It appears, therefore, there was no substantial evidence to support the jury's verdict U.S. Gypsum infringes this claim.

Claim 1, 6, 9, 10, 12, 15 and 17 of the '989 patent do claim a board or a system with a board where the outer surface of one mat is substantially free of gypsum (and by implication the other is not). As Weatherock has the other elements of these claims, it infringes each of these claims of the patent.

In summary, the court will affirm the jury's verdict as to infringement of claims 1, 2 and 5 of the '496 patent and of claims 1, 6, 9, 10, 12, 15 and 17 of the '989 patent. The court will grant defendants' motion for a new trial on Georgia-Pacific's claim U.S. Gypsum infringes and induces others to infringe claim 11 of the '496 patent, claim 8 of the '989 patent, and its motion for a new trial on claims 1 and 2 of the '900 patent.

3. Is there sufficient evidence to support the jury's verdict that U.S. Gypsum failed to show by clear and convincing evidence that the claims in issue are invalid due to obviousness?

U.S. Gypsum contends it is entitled to a judgment as a matter of law that all of the asserted claims are obvious. An inventor cannot obtain a patent "if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which" the invention pertains. 35 U.S.C. § 103. Facts to consider when determining whether the claims of a patent were obvious include:

1) the scope and content of the prior art; 2) the level of ordinary skill in the art; 3) the differences between the subject matter claimed and the prior art; and 4) other objective indicia of nonobviousness. See Graham v. John Deere Co. 383 U.S. 1, 17-18 (1966). U.S. Gypsum has the burden of proving these facts by clear and convincing evidence. Greenwood v. Hattori Seiko Co., 900 F.2d 238, 241 (Fed. Cir. 1990). The ultimate determination of obviousness, however, is a question of law. Graham, 383 U.S. at 17; Connell v. Sears, Roebuck & Co., 722 F.2d 1542, 1547 (Fed. Cir. 1983).

As to the systems claims, U.S. Gypsum contends it established at trial that system claims are old, that a glass mat faced board was known in the prior art, that the EIFS industry recognized that exterior insulation systems could be put up over virtually any sound substrate and that fiberglass reinforced gypsum board was a sound substrate. It also argues that it has shown that paper-reinforced gypsum boards had been used as a substrate and that it would have been obvious to replace a paper-reinforced board with a fiberglass-reinforced board (because paper had been identified as the weak link in the systems using paper-faced gypsum sheathing). It also points to evidence offered at the trial showing that years before Georgia-Pacific applied for the patents, U.S. Gypsum researches had considered fiberglass-reinforced gypsum boards as being desirable for use in exterior insulation systems.

U.S. Gypsum argues the board claims would have been obvious in light of the prior art, including Morrone and Rigips. It contends it showed Morrone contained each

of the following elements: (1) gypsum board sandwiched between two sheets of porous glass mat; (2) each mat having an inner and outer surface; (3) the mats comprising randomly distributed glass fibers bonded by an adhesive material; (4) the inner surface of each mat being adhered to the core by a portion of the core gypsum; and (5) one of the mats having a surface free of gypsum, and the other having portions which are coated with gypsum. It contends Rigips discloses a fiberglass mater-reinforced board with the outer surfaces of both glass-mats gypsum free.

Georgia-Pacific has responded by arguing there is substantial evidence the jury could have looked to in rejecting U.S. Gypsum's arguments. As to the system claims, Georgia-Pacific relies on the testimony of Hopkins, Randall and Lehnert and their identification of the unique problems in developing a board for the EIFS industry, including problems relating to developing a board that would be exposed to the weather. Georgia-Pacific notes that each of the references cited by U.S. Gypsum discloses interior boards. None discloses or suggests an exterior system. It also relies on Hopkins' testimony that while the EIFS industry had been looking for a better substrate for years, it was not until Randall and Lehnert conducted their experiments and developed their fiberglass mat that the need was met.

Georgia-Pacific is correct that this evidence does suggest the system claims would not have been obvious to one of ordinary skill in the art. It is sufficient to support the jury's finding U.S. Gypsum failed to meet its burden of coming forward with clear and

convincing evidence that the system claims were invalid due to obviousness.

As to the board claims, Georgia-Pacific responds that it offered evidence at the trial (evidence the jury was entitled to rely on) to show that Morrone does not have a gypsum free surface. That evidence included U.S. Gypsum's pre-trial admissions that Morrone did not have a gypsum-free surface. While Dr. Kuntze testified at trial that he believed it did, he appears to have conceded on cross examination that the drawings in Morrone and the text to the drawings appear to refer to gypsum on the outside of both sheets. Georgia-Pacific argues it is the gypsum free surface that makes its board claims patentable over the prior art, as it is the gypsum free surface that allows a manufacturer to make the fiber glass-mat faced boards on a conventional gypsum board line. Georgia-Pacific argues the jury was entitled to credit its evidence on this point.

During the oral argument following the post trial briefing counsel for U.S. Gypsum identified the following language from claim 1 of the Morrone patent as showing the patent disclosed both a gypsum-free surface and a surface coated with gypsum.

...thin glass fiber sheet adhered to at least one major side of the core, a portion of the fibers comprising said sheet being exposed on the exterior surface...a substantial number of interstices between adjacent fiber at the exterior surface of the sheet.

It appears this sentence speaks to whether the fibers are exposed, rather than to what portion of the fibers on the outer surface may otherwise be covered by gypsum. In any event, reading this sentence does not clearly show Morrone claimed a gypsum free

surface. Perhaps the best evidence that it does not show that, comes from U.S. Gypsum's pre-trial admissions that it did not read Morrone as disclosing a gypsum free surface.

Georgia-Pacific also argues the jury was entitled to credit its evidence and arguments as to Rigips, including that it taught away from manufacturing a board with simple, clear, resin-bonded glass fiber maters (as used by Morrone and Georgia-Pacific).

Georgia-Pacific also relies on substantial evidence as to secondary considerations relevant to obviousness. It cites testimony by Hopkins, Kuntz and others that Georgia-Pacific's Dens Glass products met a long felt need in the industry, its proof as to the commercial success of its Dens Glass products, including evidence that they had gained a substantial share of the market, their sales were growing at relatively high rates (38%, 28% and 50% per year) and that they were generating substantial profits for Georgia-Pacific (1994 Georgia-Pacific made over \$10 million worth of incremental profits on its Dens Glass products).

A review of the record confirms there is substantial evidence to support the jury's conclusion U.S. Gypsum failed to show by clear and convincing evidence that the claims in issue are invalid due to obviousness.

U.S. Gypsum has included other arguments in its post trial briefing. Certain of them are more in the nature of reargument of pretrial and trial decisions. To the extent they are not addressed in this opinion, they are denied for the reasons previously

identified by the court. As to other arguments not addressed in this opinion, the court has reviewed them and finds them to be without merit.

Filed in open court 2/9/95
 (NTL)
 274

IN THE UNITED STATES DISTRICT COURT
 FOR THE DISTRICT OF DELAWARE

GEORGIA-PACIFIC CORPORATION,

Plaintiff,

v.

UNITED STATES GYPSUM COMPANY
 and L & W SUPPLY CORPORATION,

Defendants.

C.A. No. 94-489 (RRM)

VERDICT

I. INFRINGEMENT

A. The '496 Patent

1. Do you find that Georgia-Pacific has shown by a preponderance of the evidence that defendants United States Gypsum Company and L & W Supply Corporation (collectively, "USG") have infringed any of the following claims of the '496 patent? (A "YES" answer to this question is a finding for Georgia-Pacific. A "NO" answer is a finding for USG.)

Claim 1	YES <u>X</u>	NO <u> </u>
Claim 2	YES <u>X</u>	NO <u> </u>
Claim 5	YES <u>X</u>	NO <u> </u>
Claim 6	YES <u> </u>	NO <u>X</u>
Claim 11	YES <u>X</u>	NO <u> </u>

2. Do you find that Georgia-Pacific has shown by a preponderance of the evidence that USG has induced infringement of any of the following claims of the '496 patent? (A "YES" answer to this question is a finding for Georgia-Pacific. A "NO" answer is a finding for USG.)

Claim 1	YES <u>X</u>	NO <u> </u>
Claim 2	YES <u>X</u>	NO <u> </u>
Claim 5	YES <u>X</u>	NO <u> </u>
Claim 6	YES <u> </u>	NO <u>X</u>
Claim 11	YES <u>X</u>	NO <u> </u>

3. Do you find that Georgia-Pacific has shown by a preponderance of the evidence that USG has contributed to the infringement of any of the following claims of the '496 patent? (A "YES" answer to this question is a finding for Georgia-Pacific. A "NO" answer is a finding for USG.)

Claim 1	YES <u>X</u>	NO <u> </u>
Claim 2	YES <u>X</u>	NO <u> </u>
Claim 5	YES <u>X</u>	NO <u> </u>
Claim 6	YES <u> </u>	NO <u>X</u>
Claim 11	YES <u>X</u>	NO <u> </u>

B. The '569 Patent

1. Do you find that plaintiff Georgia-Pacific Corporation ("Georgia-Pacific") has shown by a preponderance of the evidence that USG has infringed claim 1 of the '569 patent? (A "YES" answer to this question is a finding for Georgia-Pacific. A "NO" answer is a finding for USG).

YES NO X

C. The '900 Patent

1. Do you find that Georgia-Pacific has shown by a preponderance of the evidence that USG has infringed any of the following claims of the '900 patent? (A "YES" answer to this question is a finding for Georgia-Pacific. A "NO" answer is a finding for USG.)

Claim 1	YES <u>X</u>	NO _____
Claim 2	YES <u>X</u>	NO _____

D. The '989 Patent

1. Do you find that Georgia-Pacific has shown by a preponderance of the evidence that USG has infringed any of the following claims of the '989 patent? (A "YES" answer to this question is a finding for Georgia-Pacific. A "NO" answer is a finding for USG).

Claim 1	YES <u>X</u>	NO _____
Claim 6	YES <u>X</u>	NO _____
Claim 8	YES <u>X</u>	NO _____
Claim 9	YES <u>X</u>	NO _____
Claim 10	YES <u>X</u>	NO _____
Claim 12	YES <u>X</u>	NO _____
Claim 15	YES <u>X</u>	NO _____
Claim 17	YES <u>X</u>	NO _____

2. Do you find that Georgia-Pacific has shown by a preponderance of the evidence that USG has induced infringement of any of the following claims of the '989 patent? (A "YES" answer to this question is a finding for Georgia-Pacific. A "NO" answer is a finding for USG).

Claim 9	YES <u>X</u>	NO _____
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Claim 10	YES <u>X</u>	NO <u> </u>
Claim 12	YES <u>X</u>	NO <u> </u>
Claim 15	YES <u>X</u>	NO <u> </u>

3. Do you find that Georgia-Pacific has shown by a preponderance of the evidence that USG has contributed to the infringement of any of the following claims of the '989 patent? (A "YES" answer to this question is a finding for Georgia-Pacific. A "NO" answer is a finding for USG).

Claim 9	YES <u>X</u>	NO <u> </u>
Claim 10	YES <u>X</u>	NO <u> </u>
Claim 12	YES <u>X</u>	NO <u> </u>
Claim 15	YES <u>X</u>	NO <u> </u>

II. REVERSE DOCTRINE OF EQUIVALENTS

Do you find that USG has shown by a preponderance of the evidence that there is no infringement of any of the following claims of the patents in suit under the reverse doctrine of equivalents? (A "YES" answer to this question is a finding for USG. A "NO" answer is a finding for Georgia-Pacific).

The '496 Patent

Claim 1	YES <u> </u>	NO <u>X</u>
Claim 2	YES <u> </u>	NO <u>X</u>
Claim 5	YES <u> </u>	NO <u>X</u>
Claim 6	YES <u> </u>	NO <u>X</u>
Claim 11	YES <u> </u>	NO <u>X</u>

The '569 PatentClaim 1 YES _____ NO XThe '900 PatentClaim 1 YES _____ NO XClaim 2 YES _____ NO XThe '989 PatentClaim 1 YES _____ NO XClaim 6 YES _____ NO XClaim 8 YES _____ NO XClaim 9 YES _____ NO XClaim 10 YES _____ NO XClaim 12 YES _____ NO XClaim 15 YES _____ NO XClaim 17 YES _____ NO X**III. VALIDITY**

1. Do you find that USG has shown by clear and convincing evidence that any of the following claims of the '496 patent are invalid due to obviousness? (A "YES" answer to this question is a finding for USG. A "NO" answer is a finding for Georgia-Pacific).

Claim 1 YES _____ NO XClaim 2 YES _____ NO XClaim 5 YES _____ NO XClaim 6 YES _____ NO XClaim 11 YES _____ NO X

2. Do you find that USG has shown by clear and convincing evidence that the following claim of the '569 patent is invalid due to obviousness? (A "YES" answer to this question is a finding for USG. A "NO" answer is a finding for Georgia-Pacific).

Claim 1 YES _____ NO X

3. Do you find that USG has shown by clear and convincing evidence that any of the following claims of the '900 patent are invalid due to obviousness? (A "YES" answer to this question is a finding for USG. A "NO" answer is a finding for Georgia-Pacific).

Claim 1 YES _____ NO X

Claim 2 YES _____ NO X

4. Do you find that USG has shown by clear and convincing evidence that any of the following claims of the '989 patent are invalid due to obviousness? (A "YES" answer to this question is a finding for USG. A "NO" answer is a finding for Georgia-Pacific).

Claim 1 YES _____ NO X

Claim 6 YES _____ NO X

Claim 8 YES _____ NO X

Claim 9 YES _____ NO X

Claim 10 YES _____ NO X

Claim 12 YES _____ NO X

Claim 15 YES _____ NO X

Claim 17 YES _____ NO X

5. Do you find that USG has shown by clear and convincing evidence that any of the following claims of the '989 patent are invalid due to obviousness-type double patenting? (A

"YES" answer to this question is a finding for USG. A "NO" answer is a finding for Georgia-Pacific)

Claim 1	YES _____	NO <u>X</u>
Claim 6	YES _____	NO <u>X</u>
Claim 8	YES _____	NO <u>X</u>
Claim 9	YES _____	NO <u>X</u>
Claim 10	YES _____	NO <u>X</u>
Claim 12	YES _____	NO <u>X</u>
Claim 15	YES _____	NO <u>X</u>
Claim 17	YES _____	NO <u>X</u>

6. Do you find that USG has shown by clear and convincing evidence that any of the following claims of the '496 patent are invalid for lack of enablement? (A "YES" answer to this question is a finding for USG. A "NO" answer is a finding for Georgia-Pacific).

Claim 1	YES _____	NO <u>X</u>
Claim 2	YES _____	NO <u>X</u>
Claim 5	YES _____	NO <u>X</u>
Claim 6	YES _____	NO <u>X</u>
Claim 11	YES _____	NO <u>X</u>

7. Do you find that USG has shown by clear and convincing evidence that the following claim of the '569 patent is invalid for lack of enablement? (A "YES" answer to this question is a finding for USG. A "NO" answer is a finding for Georgia-Pacific).

Claim 1	YES _____	NO <u>X</u>
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8. Do you find that USG has shown by clear and convincing evidence that any of the following claims of the '900 patent are invalid for lack of enablement? (A "YES" answer to this question is a finding for USG. A "NO" answer is a finding for Georgia-Pacific).

Claim 1 YES _____ NO X

Claim 2 YES _____ NO X

9. Do you find that USG has shown by clear and convincing evidence that any of the following claims of the '989 patent are invalid for lack of enablement? (A "YES" answer to this question is a finding for USG. A "NO" answer is a finding for Georgia-Pacific).

Claim 1 YES _____ NO X

Claim 6 YES _____ NO X

Claim 8 YES _____ NO X

Claim 9 YES _____ NO X

Claim 10 YES _____ NO X

Claim 12 YES _____ NO X

Claim 15 YES _____ NO X

Claim 17 YES _____ NO X

III. DAMAGES

1. If you found at least one claim infringed and not invalid, what amount of damages do you find Georgia-Pacific has proved by a preponderance of the evidence?

Amount ^{\$} 325,000.00

You each must sign this verdict form:

<u>Marian Glenn Boyd</u>	<u>William R. Hurlston</u>
<u>Catharine D. Innes</u>	<u>Loann Whitman</u>
<u>Arthur J. Waite</u>	<u>Donald L. Brandy</u>
<u>Owen & Paul</u>	<u>John H. Hill</u>
<u>Margaret R. Hunt</u>	

EXHIBIT V

UNITED STATES DISTRICT COURT
DISTRICT OF DELAWARE

SRI INTERNATIONAL, INC.,
a California corporation,

Plaintiff and
Counterclaim-Defendant,

vs.

CASE NO: 04-1199 (SLR)

INTERNET SECURITY SYSTEMS, INC.,
a Delaware corporation; INTERNET
SECURITY SYSTEMS, INC., a Georgia
corporation; and SYMANTEC
CORPORATION, a Delaware corporation,

Defendants and
Counterclaim-Plaintiffs.

DEPOSITION OF GEORGE KESIDIS
VOLUME II

DATE: Friday, May 26, 2006
TIME: 9:00 A.M.
LOCATION: DAY, CASEBEER, MADRID &
BATCHELDER
20300 Stevens Creek Boulevard
Suite 400
Cupertino, CA 95014
REPORTER: Patricia Hope Sales, CRR
CSR License Number C-4423

8705
21418

Bell & Myers

CERTIFIED SHORTHAND REPORTER, INC.

GEORGE KESIDIS, VOLUME II

MAY 26, 2006

1 single link and the firewall was on -- somehow in line 10:51:04
2 on the link, why you couldn't put the service monitor 10:51:10
3 between the firewall and the LAN, or above it, or 10:51:14
4 somehow pipe the packet feed to a network service 10:51:18
5 monitor, sixteen B, located elsewhere, physically 10:51:25
6 located elsewhere. 10:51:28

7 BY MS. MOEHLMAN: 10:51:36

8 Q. Now, with respect to Kesidis Exhibit 3 where 10:51:36
9 you provide the rebuttal report on -- on invalidity -- 10:51:39
10 do you have that? 10:51:45

11 A. I do. 10:51:46

12 Q. Am I correct -- 10:51:49

13 A. Yes. 10:51:50

14 Q. -- that in this report you take no position on 10:51:50
15 whether or not the inventors disclose their best-known 10:51:54
16 mode of practicing the claims of the patents in suit? 10:51:58

17 A. I -- I don't believe I discussed that directly 10:52:06
18 in the -- in the validity. 10:52:08

19 Q. Did -- 10:52:10

20 A. You mean disclosed in the patent specification? 10:52:11

21 I'm sorry. How do you mean "disclose"? 10:52:15

22 Q. Do you understand that Mr. Smaha and 10:52:18
23 Mr. Heberlein, for example, put forth opinions that the 10:52:21
24 inventors of these patents did not disclose their 10:52:27
25 best-known mode of practicing the claims of the patents 10:52:33

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1 in suit?

10:52:37

2 A. I read those passages, yes.

10:52:38

3 Q. Okay. Do you provide any rebuttal those
4 positions in your report?

10:52:41

10:52:43

5 A. I -- I don't think I talk about best mode in my
6 report, but I'm not sure.

10:52:45

10:52:55

7 Q. Do you have an opinion with respect as to
8 whether the inventors listed on the patents in suit
9 disclose their best-known mode of practicing the claims
10 of the patents in suit?

10:53:00

10:53:03

10:53:07

10:53:10

11 MR. POLLACK: Objection. Vague and ambiguous.

10:53:13

12 THE WITNESS: I -- I believe that they disclose
13 and enable a mode of practicing the patents in suit.

10:53:21

10:53:24

14 Whether they thought it was best mode, I -- I really --
15 at the time, I really have no idea.

10:53:30

10:53:34

16 BY MS. MOEHLMAN:

10:53:38

17 Q. Do you have an idea of whether or not they had
18 ways of implementing the claims of the patent in suit
19 that they did not disclose to the patent office?

10:53:38

10:53:44

10:53:49

20 A. So let me just say that the first thing is I'm
21 not a hundred percent sure what code I did examine in
22 escrow. The SRI code I did examine in escrow was in
23 fact the appendix that was submitted with the patents
24 in suit. So I -- I don't know.

10:54:12

10:54:16

10:54:24

10:54:30

10:54:36

25 Secondly, I'm not a -- I'm not sure when, for

10:54:39

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1 example, the expert in eBayer were -- when the first 10:54:49
2 incarnations -- the first functional incarnations of 10:54:53
3 these -- I don't want to say "alternative," but other 10:54:56
4 correlation modules besides eStat were developed and 10:55:01
5 functioning. 10:55:09

6 And lastly, I'm not -- I'm not sure -- let 10:55:15
7 me -- let me amend my previous comment. 10:55:29

8 I understand that I believe it was eExpert was 10:55:31
9 under development at the time of filing of these 10:55:41
10 patents, and I have anecdotal information that there 10:55:49
11 were -- that there were tests conducted, but I -- I 10:56:03
12 have never read documents about those tests. 10:56:07

13 I -- so I -- any opinion I express about what 10:56:18
14 they actually had functioning at the time of filing the 10:56:34
15 patents and what they were able to test I -- I didn't 10:56:39
16 read firsthand. 10:56:43

17 And I didn't talk to the inventors specifically 10:56:45
18 about what they felt was the -- the best mode at the 10:56:51
19 time of filing of the patents, so I really -- I really 10:56:53
20 don't have knowledge in this area along those lines. 10:56:57

21 Q. Did you review the exhibits to Mr. Smaha's 10:57:06
22 report? 10:57:09

23 A. I did, yeah. 10:57:09

24 Q. Did you review the exhibits and the 10:57:10
25 spreadsheets that he did on the SRI code? 10:57:13

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1 A. Very, very briefly. 10:57:16

2 Q. Do you have any reason to doubt the accuracy of 10:57:16

3 Mr. Smaha's representations of what he examined with 10:57:21

4 respect to the code in escrow? 10:57:24

5 A. I -- I don't have -- 10:57:26

6 Q. Do you have -- 10:57:28

7 A. -- any reason. 10:57:26

8 Q. -- any reason to doubt whatsoever Mr. Smaha's 10:57:28

9 statements with respect to what is in the appendix? 10:57:31

10 MR. POLLACK: Objection. Vague and ambiguous. 10:57:34

11 THE WITNESS: I -- I don't have any reason to 10:57:36

12 doubt. 10:57:38

13 BY MS. MOEHLMAN: 10:57:39

14 Q. Did you upon receiving Mr. Smaha's report do 10:57:39

15 anything to verify whether or not what was in SRI 10:57:42

16 source code prior to November of 1998 -- whether -- 10:57:48

17 whether those modules that he listed as existing before 10:57:53

18 November of 1998 did in fact exist as of November 10:57:56

19 1998? 10:58:00

20 A. I just -- when I looked at those comments, I 10:58:02

21 just assumed that he was correct. 10:58:06

22 Q. And you have done nothing, given no thought as 10:58:12

23 you sit here today, as to whether or not what Mr. Smaha 10:58:17

24 presented indicates that the inventors in fact did not 10:58:19

25 disclose their best mode to the patent office when they 10:58:24

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1 filed the patents in suit?

10:58:28

2 MR. POLLACK: Objection. Lacks foundation,
3 argumentative, vague and ambiguous.

10:58:30

10:58:31

4 THE WITNESS: I -- to be honest with you, I
5 really haven't giving it -- given it a lot of thought
6 since I read Smaha's. I read it, I assume what he was
7 saying was true.

10:58:33

10:58:37

10:58:42

10:58:46

8 The -- the problem -- you know, why I didn't
9 give it a lot of thought is, first of all, I didn't
10 really have time between then and now. And, secondly,
11 just as a general statement, evaluating the performance
12 of such complex systems is not a simple task.

10:58:49

10:58:55

10:58:58

10:59:03

10:59:10

13 The Lincoln Labs data sets were the very, very
14 early attempts at trying to create a baseline or a
15 benchmark by which one could objectively and publicly
16 evaluate the performance of different, in this case,
17 intrusion detection systems.

10:59:16

10:59:26

10:59:33

10:59:44

10:59:48

18 The -- the problem is that sometimes tests are
19 only as good as the data. And it's -- it's very
20 difficult for me to know -- I mean in hindsight the
21 preliminary Lincoln Labs data sets are understood today
22 to be rather artificial, but -- and -- and are
23 typically not used in scholarly work, but I don't even
24 want to say that in a negative way because I simply
25 don't have enough information to answer your question.

10:59:51

10:59:55

11:00:01

11:00:09

11:00:12

11:00:21

11:00:26

11:00:28

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